

DOCUMENT RESUME

ED 328 970

EA 022 675

AUTHOR Jansen, Anicca C.
TITLE Can Sales Tax Revenue Equitably Finance Education?
PUB DATE Nov 90
NOTE 26p.; Paper presented at the Annual Meeting of the Association of Collegiate Schools of Planning (32nd, Austin, TX, November 4, 1990).
PUB TYPE Reports - Evaluative/Feasibility (142) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Educational Equity (Finance); *Educational Finance; Elementary Secondary Education; Equalization Aid; Expenditure per Student; *Finance Reform; Financial Policy; Fiscal Capacity; Rural Schools; School District Spending; School Funds; State Aid; Tax Allocation; *Tax Effort; Taxes
IDENTIFIERS *Tennessee

ABSTRACT

In 1988, 66 of Tennessee's rural school districts brought suit against the state government claiming that the school funding system of a local option sales tax discriminates against rural areas. This study examines the effects of increased reliance on local sales tax revenue on Tennessee's school expenditures. Not every county can support a major trade center, hence some are net revenue losers. Differences are not solely the result of tax rate variations. Counties with higher average incomes collect more revenue per dollar. Two possibilities which have been proposed to explain the disparities are that persons in rural areas spend a smaller portion of their total income and spend more on nontaxable items. Both possibilities are unlikely, as low income persons spend a higher proportion of their income, and both food and clothing are taxed. In fact, the disparities are most likely due to exportation of sales tax revenue. An increase in tax rates for rural nonmetro areas will not reduce inequities. These areas do not have the capacity of metro and semi-urban nonmetro areas, and revenues may be reduced because of increased prices. Interjurisdictional inequities will become more pronounced if local sales tax is increasingly relied on to finance education, further necessitating equalization efforts by the state. (13 references) (EJS)

* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *

EA

ED328970

CAN SALES TAX REVENUE EQUITABLY FINANCE EDUCATION ?

by Anicca C. Jansen, Economist

United States Department of Agriculture, Economic Research Service

1301 New York Avenue, NW

Room 324

Washington, DC 20005-4788

202/219-0542

Presented at the Association of Collegiate Schools of Planning

(ACSP) 32nd Annual Conference

Austin, Texas

November 4 1990

The views expressed in this paper are the author's, and do not necessarily reflect the views of the US Department of Agriculture

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

- ✓ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.

- Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

A. Jansen

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

569 280 A3

Abstract

This paper examines local sales tax revenue and education expenditure in Tennessee for the fiscal and school years ending in 1988. Rural-urban differences in per pupil sales tax revenue and capacity and education spending are analyzed. The results show that rural counties have markedly less sales tax revenue and capacity per pupil than more urban counties. If local governments increasingly rely on sales tax revenue to finance education, interjurisdictional inequities in education expenditure will become more pronounced. The more rural the area, the more severely it will be affected by this funding shift.

CAN SALES TAX REVENUE EQUITABLY FINANCE EDUCATION ?

INTRODUCTION

Sixty-six of Tennessee's rural school districts brought suit against the State government in 1988, claiming that the State's system of local option sales taxes discriminates against rural school districts. The rural districts contend that populated urban areas draw rural shoppers and then use collected sales taxes revenue to subsidize their own schools, draining rural areas of needed revenue.¹ Historically, property taxes have been the greatest source of revenue for local governments and local schools and school districts, both in Tennessee and across the United States. Recently, however, greater reliance has been placed on sales tax, which unlike property taxes, can be used to export the costs of local governments.² Those who shop outside their own tax-collecting area (municipality or county, for example) help pay for another jurisdiction's services. In the State of Tennessee these services would include the education of students living in that jurisdiction.³

Tennessee provides a useful case study because of its heavy reliance on sales tax. Sales tax revenue provided 25 percent of Tennessee's State and local government revenue in 1988, with local

governments getting 10 percent of their general revenue from this source. In only four states are local governments more reliant on sales tax revenue than in Tennessee. Education is particularly affected because in Tennessee 50 percent of local sales tax revenue must be spent on education.

The current court case adds further interest to this study. Unlike the cases preceding it, the Tennessee court case focuses on the exportation of tax revenue and the equity issue of "fiscal equivalence." Fiscal equivalence is present when the geographic boundary enclosing those paying for a publicly-provided good matches boundary defining the people who benefit from it (Olson, 1969).⁴

This study attempts to determine the effects of increased reliance on sales tax revenue on education budgets. It examines whether there is evidence of tax exportation (the absence of fiscal equivalence due to financing arrangements) in Tennessee, and how this does or could affect education spending.

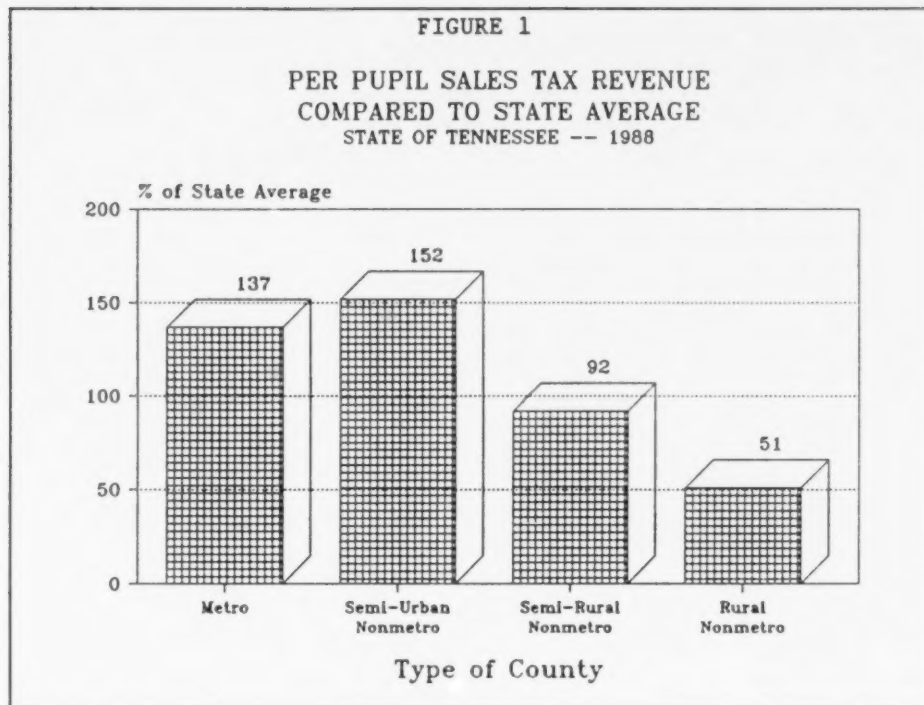
URBAN-RURAL DIFFERENCES IN TAX REVENUE AND SALES TAX CAPACITY

There has been an increasing trend for nonmetropolitan residents to do more shopping in suburban malls. These purchases tend to be

for consumer durables and other higher priced items, which garner an appreciable amount of sales tax revenue. As pointed out in a recent Advisory Commission on Intergovernmental Relations (ACIR) publication, since every county cannot support a major trade center, where there is a local sales tax some counties will be net revenue losers (Stinson, 1990).

This seems to be true in Tennessee. In 1988 Tennessee's per county aggregate local sales tax revenue ranged from \$121 to \$2025 per pupil, with the lowest amount being in a rural county (Hancock County) and the highest in one of the most urban counties (Davidson County). Counties with a large urban population collected more sales tax revenue per pupil in 1988 than did the more rural counties. On a per pupil basis, semi-urban nonmetro counties (nonmetro counties with an high urban population) collected the most sales tax revenue, 152 percent of the state average. In contrast, rural nonmetro counties collected only 51 percent of the state average (See Figure 1).⁵

While size of urban population does appear to be a factor in amount of sales tax revenue collected per pupil, adjacency to metro counties does not appear to be important. (See Table 1.)



Differences in sales tax revenue are not solely the result of variations in local option tax rates, which ranged from 1.0 to 2.75 in 1988. Figure 2 illustrates local sales tax capacity, or maximum possible sales tax revenue, for Tennessee's counties. Table 1 gives sales tax capacity by county type. As Table 1 shows, there is a marked difference in the sales tax capacity across the various types of counties. Capacity was estimated by assuming that all counties invoke the highest possible local option sales tax rate of 2.75%. It was also assumed that the same purchases would

TABLE 1
SUMMARY STATISTICS LOCAL OPTION SALES TAX REVENUE
TENNESSEE -- 1988

COUNTY TYPE	N	MEAN SALES TAX CAPACITY PER PUPIL*	MEAN SALES TAX COLLECTED PER PUPIL	MEAN ABSOLUTE SALES TAX EFFORT**	MEAN RELATIVE SALES TAX EFFORT***	MEAN ACTUAL SALES TAX RATE
<u>METRO COUNTIES</u>						
<u>URBAN</u>						
2	25	889 (564)	678 (438)	.77 (10)	1.04 (.13)	2.13 (.26)
3	1	910 (--)	745 (--)	.82 (--)	1.10 (--)	2.25 (--)
<u>NONMETRO COUNTIES</u>						
<u>SEMI-URBAN</u>						
4 (Adjacent)	3	1076 (226)	761 (78)	.73 (.16)	.98 (.21)	2.00 (.43)
5 (Nonadjacent)	4	1062 (296)	753 (183)	.73 (.13)	.98 (.17)	2.00 (.35)
<u>SEMI-RURAL</u>						
6 (Adjacent)	17	578 (152)	436 (163)	.75 (.12)	1.00 (.16)	2.05 (.33)
7 (Nonadjacent)	24	623 (155)	476 (131)	.77 (.09)	1.00 (.12)	2.10 (.24)
<u>RURAL</u>						
8 (Adjacent)	10	309 (81)	235 (69)	.76 (.12)	1.02 (.16)	2.10 (.34)
9 (Nonadjacent)	11	433 (114)	270 (79)	.64 (.16)	.85 (.22)	1.75 (.45)

*(Average, per pupil, assuming 2.75 percent local option rate).

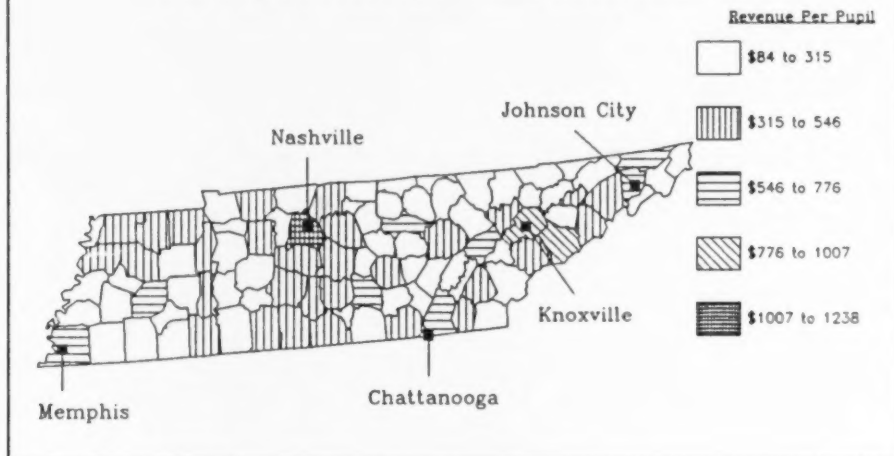
** Mean Absolute Effort = average of (county sales tax rate/2.75).

*** Mean Relative Effort = average of (county sales tax rate/2.05), where 2.05 = state average local option sales tax rate. Standard Deviations are in parentheses.

have been made in all counties despite the higher after-tax prices resulting from a sales tax hike. That is, it was assumed there was no "dead weight loss" from taxation.

FIGURE 2

TENNESSEE LOCAL SALES TAX CAPACITY
Per Pupil FY1988 (Assuming 2.75% Local Rate)

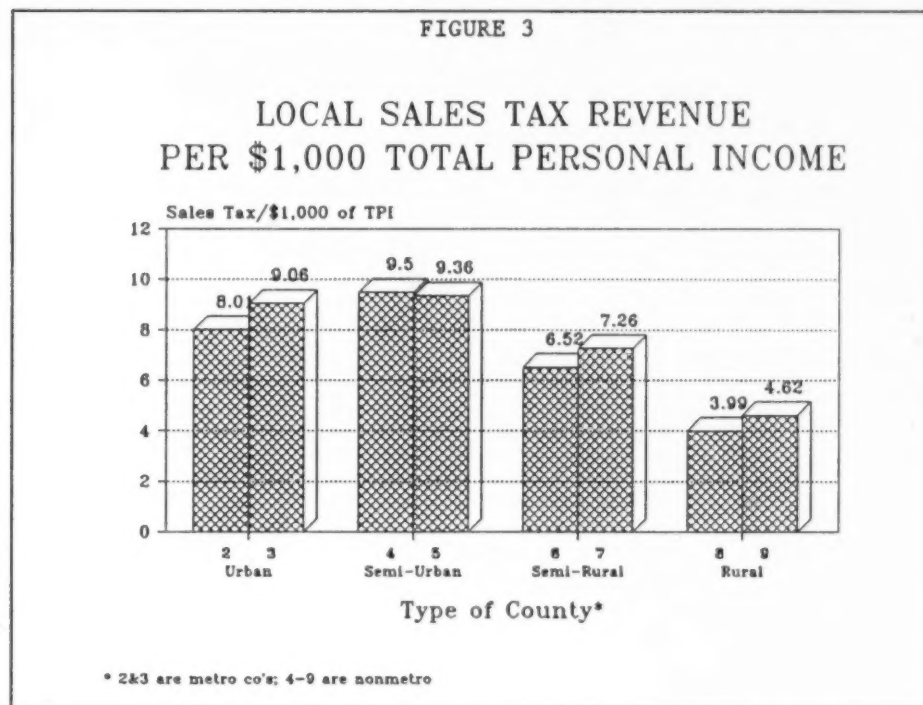


Rural and semi-rural nonmetro counties fall far behind other counties in terms of sales tax capacity, with rural and semi-rural adjacent counties having less capacity than the corresponding nonadjacent counties. (See Table 1.)

AVERAGE INCOME AND SALES TAX REVENUE

Differences in area income to some extent explain the variation in local sales tax revenue in Tennessee. However, counties with higher average incomes collected more sales tax revenue per dollar of personal income than did less well off counties. In 1988, semi-rural and rural counties, which have on average less personal income per pupil than more urban counties, collected less sales

tax revenue per dollar of personal income than more urban counties. (See Figure 3.)



There are three possible, although not exhaustive, explanations for differences in sales tax revenue relative to income in Tennessee. The first is that persons in rural and semi-rural nonmetro areas spend a smaller portion of their income. While this is possible, low income persons are usually forced to spend a higher portion of their incomes than more wealthy persons. So, this explanation doesn't seem likely.

The second explanation is that residents of these same counties spend more of their income on nontaxable items than residents of semi-urban nonmetro and metro counties. Given that most items, including food and clothing, are subject to sales tax in Tennessee this also seems unlikely.⁶

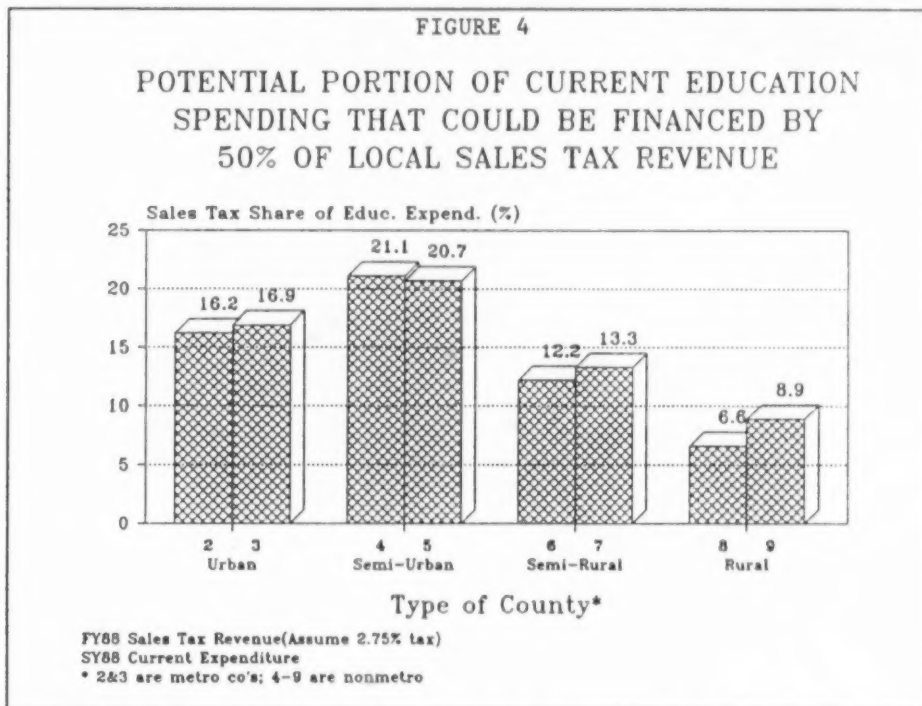
Finally, a smaller portion of sales tax revenue relative to personal income, as occurs in Tennessee's semi-rural and rural counties, can be due to the exportation of sales tax revenue, i.e., persons from semi-rural and rural counties spending part of their income in urban nonmetro and metro counties.⁷ This is the most likely explanation for the revenue patterns evidenced in Tennessee.

The high sales tax revenue of semi-urban nonmetro counties indicates that these counties serve as trade centers with at least some of the sales tax revenue collected coming from shoppers attracted from other counties. This being the case, the Tennessee problem is not confined to metro-nonmetro competition, but also includes competition within nonmetro areas -- between semi-urban and the more rural nonmetro counties.⁸

SALES TAX CAPACITY AND EDUCATION SPENDING

The trend toward financing local government in general, and education in particular, with sales tax revenue does not bode well for Tennessee's rural and semi-rural counties. If these counties had the same tax rate as semi-urban nonmetro and metro counties, sales tax revenues received would still provide only a small portion of current levels of education spending.

Figure 4 shows the portion of school year 1987-88 expenditures that could have been funded by FY88 sales tax revenue if all



counties had had a local option rate of 2.75 percent. (The above

assumptions apply.) Since a minimum of 50 percent of sales tax revenue is earmarked for education, the portions shown illustrate how much of the School Year (SY) 1987-88 budget could have been paid for with 50 percent of collected sales tax revenue.

By doubling the values in Figure 4 it can be seen that, even if the rural nonmetro counties had applied all local sales tax revenue to education, they still would have been able to fund only about 13 to 18 percent of that years' education budget with sales tax revenue. In contrast, the semi-urban nonmetro counties could fund up to 41 percent of the education budgets with sales tax revenue.

SALES TAX REVENUE AND EDUCATION SPENDING

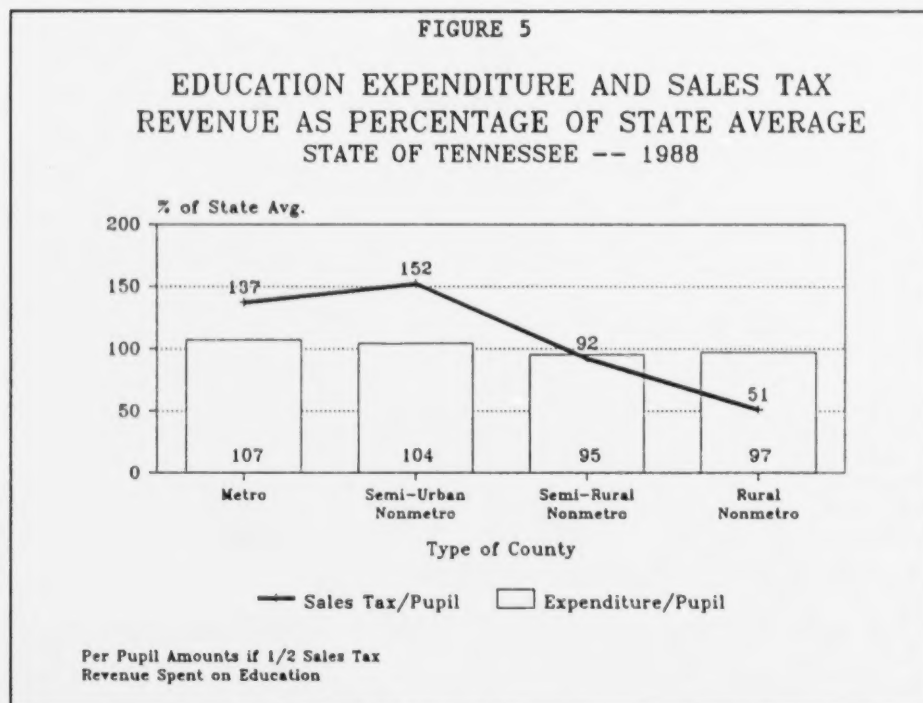
As mentioned above, at least 50 percent of a county's local sales tax revenue must be spent on education within that county. The manner of the distribution among school districts is at the discretion of the county government. Ideally, State education financing schemes (including the use of equalization rates) should attenuate the wealth disparity that results from differences in

TABLE 2
EDUCATION EXPENDITURE PER PUPIL -- SCHOOL YEAR (SY) 1987-88

County Type	N	Min	Max	Mean	Std. Dev.	Coef Disp. ⁹
<u>METRO COUNTIES</u>						
<u>URBAN</u>						
2	25	2040	3907	2631	492	14
3	1	2685	2685	2685	NA	NA
<u>NONMETRO COUNTIES</u>						
<u>SEMI-URBAN</u>						
4 (Adjacent)	3	2427	2687	2551	130	4
5 (Nonadjacent)	4	2277	3076	2586	348	10
<u>SEMI-RURAL</u>						
6 (Adjacent)	17	1990	2730	2367	214	7
7 (Nonadjacent)	24	1892	2855	2332	224	7
<u>RURAL</u>						
8 (Adjacent)	10	2115	2710	2325	209	7
9 (Nonadjacent)	11	2212	2893	2438	191	5

local sales taxes and other tax revenues. Looking at Figure 5, where values include State aid, this appears, on average, to occur. However, on a county-by-county basis, expenditure per pupil in Tennessee varies markedly. Current per pupil expenditure for school year 1987-88 ranged from \$1892 (Lewis County) to over twice that amount, \$3907 (Davidson County).¹⁰

The last column of Table 2, Coefficient of Dispersion, gives the variation within the different county groupings. The greatest per pupil variation occurs within large metro counties (14 percent)



and the least variation occurs in adjacent semi-urban and nonadjacent rural counties (7 and 5 percent). This means that there is more variation in spending levels among large metro counties than among other types of counties. It also means that average expenditure figures for adjacent semi-urban and nonadjacent rural counties are more likely to represent spending in any given county within that grouping than the respective averages for the other groupings.

While average levels of per pupil education expenditure decrease with the level of urban population, the striking differences that

occur across counties with sales tax revenue are not evident in education spending. Semi-urban nonmetro areas, which collected the largest amount of sales tax revenue per pupil in 1988, spent on average about \$2575 per pupil. This is \$80 to \$100 less per pupil than metro counties, but \$150 to \$250 more than the amounts spent by rural and semi-rural nonmetro counties (See Table 2). As with sales tax revenue, adjacency did not affect education expenditure.

As Figure 5 suggests, a dollar-to-dollar relationship between sales tax revenue and education spending does not exist. Regression analysis, controlling for number of students and income, suggests that a dollar increase (decrease) in sales tax revenue per pupil is associated with a 28 cent increase (decrease) in per pupil expenditure. (See regression results in appendix.) These results are somewhat surprising given that 50 percent of all local sales tax revenue is to be spent on education.

If local governments are using at least 50 percent of local sales tax revenue for education, then the model suggests that as sales tax revenue increases, local support for education from other revenue sources decreases. This means that counties with more sales tax revenue rely less on, for example, property tax revenue

and state aid to finance education than counties with less sales tax revenue.

CONCLUSION

Local governments are increasingly trying to diversify their revenue bases. This is due both to increased revenue need as well as growing taxpayer frustration with rising property taxes. It is not surprising, then, that local governments, with states' blessings are beginning to turn to the use of sales tax revenue to increase their tax base. However, this form of revenue may introduce new, potentially dramatic, inequities into the provision of local government goods and services.

An increase in sales tax rates in rural and semi-rural nonmetro areas will not reduce these inequities to any great extent because these areas do not have the capacity of metro and semi-urban nonmetro areas. While lowering tax rates in more rural areas may make them more competitive with semi-urban nonmetro trade center counties, by drawing shoppers away from these trade centers, a substantial increase in sales would be necessary for significant increases in sales tax revenues. In addition, increases in tax rates may actually reduce revenue if total sales decrease as a result of increased prices.

In the Tennessee case, the local sales tax base varies greatly among counties. Sales tax revenues and capacity are particularly low in rural counties. These counties are unable to fund any significant portion of their education budgets with sales tax revenue. If equal education spending per pupil is the goal, then local option sales tax revenue should be used judiciously as a supplement to property tax revenue for financing education.

Because there are great variations in the degree to which local governments can finance education with local option sales tax revenue, too much reliance on local sales tax revenue will lead to inequities. While average levels of education spending do not vary markedly among the groups compared here, increased reliance on sales tax revenue would disturb the balance. Further, increased reliance on local sales tax revenue will not obviate, but will further necessitate, equalization efforts by states.

NOTES

1. While spending levels at the school district level are available, sales tax revenue is collected at the county level. Thus, in order to make comparisons between education expenditure and sales tax revenue, this study uses county aggregate figures. The Tennessee case went to trial Oct 29, 1990.

2. There is also increased reliance on user fees.

3. This type of potential inequity makes the Tennessee case different from other school finance court cases (California, New Jersey, Kentucky and Texas) which have mainly focused on property taxation, and its relationship to inequality in education spending. These other cases considered whether variations in property tax base resulted in uneven and therefore inequitable education spending differences between property-rich and property-poor jurisdictions. For a summary of these cases see Julie Kosterlitz, 1990.

In Tennessee, commercial and industrial property is taxed on 40 percent of assessed value, whereas agricultural and residential property is taxed on 25 percent of assessed value. With rural and semi-rural nonmetro counties having proportionally less commercial and industrial property, they are at a fiscal disadvantage vis-à-vis urban areas with respect to property tax base. This is further compounded by recent declines or low increases in the value of agricultural land, and agricultural assessments being based on "present use" rather than full market value of the land. One result of this is higher property tax rates in rural and semi-rural nonmetro counties. Like sales tax rates, property tax rates have also increased considerably since 1982 (Leuthold, 1988 & 1990). Thus, while not the focus of the current court case, property tax base differences probably do occur in Tennessee.

4. Fiscal equivalence is particularly elusive in the case of primary and secondary education. Since many young people tend to move on after completing high school, a local government other than the one that provided their education will receive the benefits. Thus, to achieve complete fiscal equivalence in education would require financing education at the national level -- a concept too laden with political and socio-economic issues to be discussed here. This study assumes that, while complete fiscal equivalence is not likely, it is worth examining the degree to which local/state financing arrangements increase (or decrease) fiscal equivalence.

5. For this study counties are classified using urban-rural continuum ("Beale") codes developed by USDA Economic Research Service staff. This system codes metropolitan counties by the size of their population and classifies nonmetro counties by both the size of their urban population and adjacency or nonadjacency to metropolitan counties. Adjacency is based on commuting patterns. "Adjacent" counties are those with at least 2 percent of the employed labor force commuting to a central metro county. Even-numbered classifications (4, 6, and 8) are adjacent and odd numbered (5, 7, 9) are nonadjacent. A county can be physically adjacent to a metro county and classified as "nonadjacent" if there is no significant amount of commuting to that, or any other, metro county. Accordingly, codes 0 and 1 are metropolitan counties with the largest urban population and codes 8 and 9 are nonmetropolitan counties with no urban population, with 8 being adjacent and 9 nonadjacent. In this paper "urban" and "metro" are used interchangeably. Also, for simplification and ease of reading, nonmetro counties are referred to as "semi-urban" (codes 4 & 5), "semi-rural" (codes 6 & 7) or "rural" (codes 8 & 9). There are no type 0 or 1 counties in Tennessee. (Please see the Appendix for a more complete explanation and map of Tennessee's urban-rural continuum codes.)

6. Few purchases in Tennessee escape taxation. Among exempt sales are labor on real property (e.g., janitorial services); professional services (doctors', lawyers', CPAs' fees); and, items purchased with food stamps or WIC coupons. In addition, only the first \$1600 of an item is subject to local sales tax.

7. For an interesting study of the degree of economic support provided by local area non-residents to a larger, more central area see Michael Keane, 1989.

8. A recent study of Oklahoma nonmetro areas addresses competition within nonmetro areas and concludes that more rural areas can only compete with larger nonmetro trade centers if the rural counties' tax rates are at or below the rate of these competing areas (Snodgrass & Otto). However, because of their limited sales tax base, Tennessee's rural counties have little to gain from lowering tax rates unless lower rates trigger a very large increase in sales.

9. The Coefficient of Dispersion is a measure often used to calculate variations in effective property tax rates. It is the absolute value of the average deviation from the mean, divided by the mean. In other words it is the percent deviation from the

mean. Since it is based on average deviation instead of standard deviation, it is less subject to inflation by large outliers. Deviation from the median can also be used. For property tax purposes, variation below 20 percent is considered acceptable, and below 10 percent is outstanding.

10. Current expenditure is used because it does not include major but episodic capital expenditures that distort comparisons across school districts.

DATA SOURCES

Average Daily Attendance, Education Spending: State of Tennessee, Department of Education for estimates of average daily attendance.

FY88 sales tax revenue and rates: Frank O. Leuthold, University of Tennessee, Knoxville.

Total Personal Income: Bureau of Economic Analysis, U.S. Department of Commerce.

BIBLIOGRAPHY

Butler, Margaret. 1990. "Rural-Urban Continuum codes for Metro and Nonmetro Counties." USDA Economic Research Service. Washington, DC.

Keane, Michael J. 1989. "The Significance of Spatial Dependencies in Small Area Income Determination Models." Regional Studies. 23(5):455-462.

Kosterlitz, Julie. 1990. "Schoolhouse Equality." The National Journal. 22(29):1768-1773.

Leuthold, Frank O. 1988. "Fiscal Stress of Tennessee Rural Counties," Research Report 88-22. Knoxville: University of Tennessee, Department of Agricultural Economics and Rural Sociology, Agricultural Experiment Station. October.

———. 1990. "Changes in Local Taxes for Tennessee Counties," Research Report 90-09. Knoxville: University of Tennessee, Department of Agricultural Economics and Rural Sociology, Agricultural Experiment Station. March.

Olson, Mancur Jr. 1969. "Strategic Theory and Its Applications. The Principle of "Fiscal Equivalence": The Division of Responsibilities Among Different Levels of Government." American Economic Review. 59(May):479-487.

Peevely, Gary L. and John R. Ray. 1989. "Equity As Determined By Locally Funded Teaching Positions in Tennessee Schools." Journal of Education Finance. 15(Fall):189-204.

- Snedecor, George W. and William G. Cochran. 1982. Statistical Methods. Seventh Edition, Second Printing. Ames, Iowa:Iowa State University Press.
- Snodgrass, Dodd W. and Daniel M. Otto. 1990. "Analysis of Local Sales Taxation in Rural Areas: An Oklahoma Study." Growth and Change. Spring:34-45.
- Stinson, Thomas F. 1990. "Local Revenue Diversification: Implications for Nonmetropolitan Communities." Local Revenue Diversification: Rural Counties. Advisory Commission on Intergovernmental Relations (ACIR) Staff Report SR-13(May):67-85.

APPENDIX TABLE I
URBAN-RURAL CONTINUUM CODES

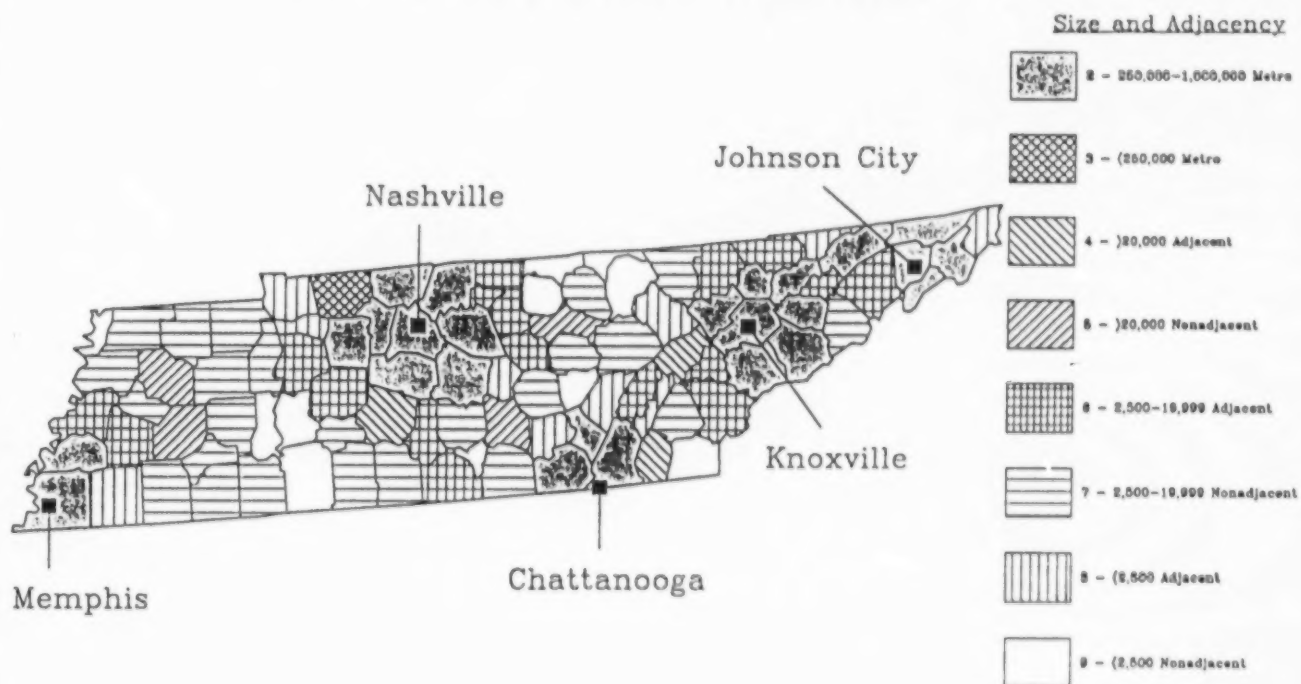
Code	
	Metro Counties:
0	Central Counties of metro areas of 1 million population or more
1	Fringe counties of metro areas of 1 million population or more
2	Counties in metro areas of 250,000 to 1 million population
3	Counties in metro areas of fewer than 250,000 population
	Nonmetro Counties: ¹
4	Urban population of 20,000 or more, adjacent to a metro area
5	Urban population of 20,000 or more, not adjacent to a metro area
6	Urban population of 2,500 to 19,999, adjacent to a metro area
7	Urban population of 2,500 to 19,999, not adjacent to a metro area
8	Completely rural or fewer than 2,500 urban population, adjacent to a metro area
9	Completely rural or fewer than 2,500 urban population, not adjacent to a metro area

¹ An adjacent county according to this classification must meet both of the following criteria:

- 1) It must be physically adjacent to one or more SMSA's, and
- 2) have at least 2 percent of the employed labor force in the nonmetro county commuting to central metro counties (Butler, 1990).

TENNESSEE

Beale (Urban-Rural Continuum) Codes



REGRESSION ANALYSIS RESULTS

Dependent Variable: EXPUP88

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Model	4	5220150.82	1305037.71	22.469	0.0001
Error	90	5227308.71	58081.21		
C Total	94	10447459.53			
	Root MSE	241.00043	R-square	0.4997	
	Dep Mean	2449.96737	Adj R-sq	0.4774	
	C.V.	9.83688			

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for HO: Parameter=0	Prob> T
INTERCEP	1	2061.20	156.03	13.210	0.0001
ADA88	1	0.022162	0.00749449	2.957	0.0040
ADA2	1	-0.000000140	0.00000005	-2.591	0.0112
INCPUP88	1	1.646399	2.784131	0.591	0.5558
STPUP88	1	0.277961	0.13277977	2.093	0.0391

Where:

- EXPUP88 - Current Expenditure 1988 per Pupil
- ADA88 - Average Daily Attendance 1988
- ADA2 - Average Daily Attendance 1988 -- squared
- INCPUP88 - Total Personal Income 1988 per Pupil Measured in Thousands of Dollars
- STPUP88 - Local Option Sales Tax Revenue 1988 per Pupil

and all dollar values are 1988 dollars.